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## Stumps help recreate habitat

Trees, stumps have been used to make wetlands along the last section of Del. 1

By **MICHELE BESSO**

Bear Bureau reporter

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If you've driven along the new section of Del. 1 and seen what looks eerily like a tree graveyard, don't be alarmed.

The state Department of Transportation is experimenting with a type of wetland mitigation or replacement that allows nature to determine when and where regrowth will occur.

Uprooted trees and stumps have been scattered across low-lying fields along Del. 1 south of Black Diamond Road and east of Massey Church Road. When the stumps rot, they'll introduce organic materials into the soil to stimulate the growth of natural vegetation. Migratory birds and animals will deposit seeds and spawn new growth, and the stumps will provide a perch for birds and waterfowl, said Ken Dunne, a DelDOT environmental scientist. The process is called "natural regeneration."

Using tree stumps to help restore wetland habitat is not a new technique, experts said. DelDOT has used them before, but never to this degree, DelDOT spokesman Mike Williams said.

Richard McCracken, 65, of Smyrna, said he noticed the stumps when driving to Wilmington on Del. 1 recently.

"I just thought it was strange," he said. "It's not too unsightly the way they have spread them out. If it helps the wetlands, I think it's a wonderful idea."

But some residents who live on Black Diamond Road and Massey Church Road, are not happy with their view of the stumps.

"There used to be a pretty field out there and now it's an eyesore," said Smyrna resident Donald McCain. "I think it's an environmental hazard and will be a mosquito breeding area. That's bad news."

Jim White, associate director for land and biodiversity management at the Delaware Nature Society, said he thinks it's a good idea to use stumps.

"Aesthetically, I don't know if that's pleasing, but it will change quickly and won't be as dominating," White said. "It's amazing the natural succession that will move in and other plants that will come in. Right now, it still looks pretty artificial."

Wetlands are areas where water covers the soil, or is present near the surface of the soil all year or for varying periods of time during the year, including the growing season. The wet conditions favor the growth of specially adapted



The News Journal/OSWALDO JIMENEZ

**DelDOT hopes that nature will take it course and create a permanent wetland in this field of uprooted stumps and trees in the old field off Del. 1 north of Smyrna.**

### RECIPE FOR A WETLAND

The following is the general process for creating a wetland out of a farm field:

- Dig and grade the soil down to an elevation that allows water to seep in and support plants that grow in wet conditions.
- Wait for natural revegetation to take place or plant plants and trees.
- Monitor the site for several years to make sure the vegetation grows.
- If stumps are used, dig into the ground and place the stumps there and let them decay. Eventually, the stumps will become less visible and a habitat will be established.

*Source: Bill Moyer, manager of Wetlands and Subaqueous Lands for the state Division of*

plants and promote the development of characteristic wetland soils.

More than 250 acres of wetlands were destroyed or affected during the construction of Del. 1. In addition to providing important habitats for wildlife, wetlands play a critical role in regulating the movement of water within watersheds, Dunne said.

Under federal law, Delaware was required to create two acres of wetlands to replace each acre affected or destroyed during the building of Del. 1. The highway's last nine-mile section linking Smyrna and Odessa was completed last month.

About 488 acres of wetlands have been created. Those created during the first phase of the construction of Del. 1 are considered true wetlands because they have been functioning for five or six years. The stumps site is considered a wetland area, but will be monitored annually to make sure it works as planned, Dunne said.

The last section of Del. 1 disturbed 69 acres of forested wetlands. DelDOT needed to restore 138 acres: Ninety-three acres were treated with scattered stumps, a second smaller site included about 16 acres of stumps and six or seven other locations make up the remainder of the acreage, Dunne said.

In these newly created wetlands, a layer of compacted silt clay was deposited 2 feet below the surface. DelDOT excavated the clay along Del. 1 and it was too fine to be used in construction, Dunne said. The clay slows the water from seeping into the soil and keeps the layers above it wetter in spring, maintaining the habitat. The hundreds of stumps which average about 3 feet tall, may be visible for at least two years until they eventually are covered by grass or trees.

DelDOT officials said they've received several calls from motorists and residents about the stumps.

"It's something they are not used to seeing," DelDOT spokesman Mike Williams said. "They are more just surprised and curious. After they drive by a couple times, they'll get used to it."

Many other states have used the stump style of mitigation, Williams said. DelDOT may use small stumps for wetlands mitigation in the planned expansion of I-95 near the Christiana Mall, but there are no other projects in the works.

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